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INSTRUCTION MANUAL

HD SDI
Full HD Mega Pixel Dome Camera

Before installing and using the camera, please read the instructions thoroughly and retain them for reference.

INFORMATION FOR USER

CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Regulatory Notice

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions :

(1)This device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause interference, in which case the user will be required to correct the interference at his own expense.

WARNING - Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

CAUTION : To prevent electric shock and risk of fire hazards:

- Do NOT use other than specified power source.
- Do NOT expose this appliance to rain or moisture.

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PRECAUTIONS

- **Do not install the camera in extreme temperature conditions.**
  Do use the camera under conditions where temperatures are within -10°C to 50°C. Especially be careful for ventilation under high temperatures.

- **Do not install or use the camera in an environment where the humidity is high.**
  It can cause the image quality to be poor.

- **Do not install the camera under unstable lighting conditions.**
  Severe lighting change or flicker can cause the camera to work improperly.

- **Never use the camera close to a gas or oil leak.**
  It can cause malfunctions to occur.

- **Do not disassemble the camera.**
  There are no user-serviceable parts inside it.

- **Do not drop the camera or subject them to physical shock.**
  It can cause malfunctions to occur.

- **Never keep the camera directly face to strong light.**
  It can damage CCD.

- **Do not expose the camera to rain or spill beverage on it.**
  If it gets wet, wipe it dry immediately. Liquids can contain minerals that corrode the electronic components.

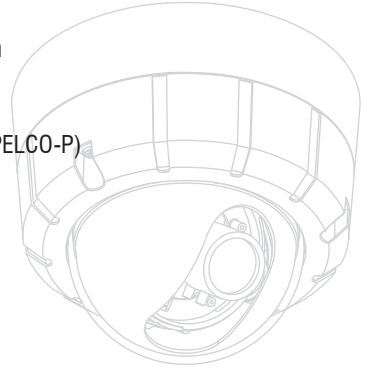
- **Note**
  If the camera is exposed to spotlight or object reflecting the strong light, smear or blooming may occur.
  Please check the power whether it satisfies the normal specification before connecting the camera.

FEATURES

VANDAL DOME HOUSING

This color video camera is designed for use in monitoring systems.

- IP67 Rating, Aluminum Die-casting Rugged Vandal proof Camera
- Wall or Ceiling Mounting through 3-Axis camera bracket
- 1/3" Panasonic CMOS sensor
- Full HD Resolution
- DAY & NIGHT
- WDR (Wide Dynamic Range)
- DNR (Digital Noise Reduction, 2D+3D)
- Privacy mask Function
- On Screen Display
- Intelligent motion detection
- HD-SDI/CVBS Output
- Multi Protocol(PELCO-D, PELCO-P)

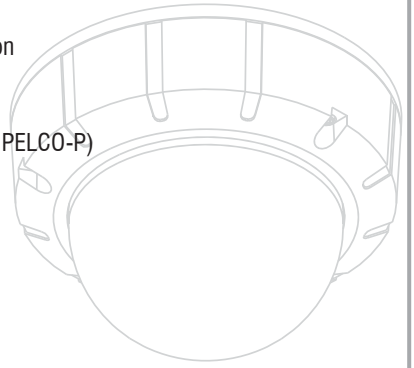


FEATURES

PLASTIC DOME HOUSING

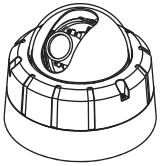
This color video camera is designed for use in monitoring systems.

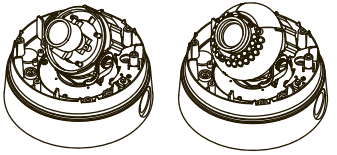
- Wall or Ceiling Mounting through 3-Axis camera bracket
- Safety strap holds dome cover in place while making adjustments
- 1/3" Panasonic CMOS sensor
- Full HD Resolution
- DAY & NIGHT
- WDR (Wide Dynamic Range)
- DNR (Digital Noise Reduction, 2D+3D)
- Privacy mask Function
- On Screen Display
- Intelligent motion detection
- HD-SDI/CVBS Output
- Multi Protocol(PELCO-D, PELCO-P)



MODEL SELECTION

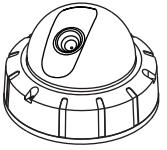
3PCS VANDAL HOUSING

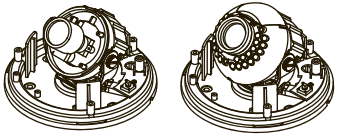




Normal type IR type

PLASTIC HOUSING

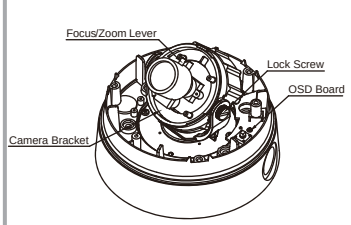




Normal type IR type

PART NAMES

3PCS VANDAL HOUSING



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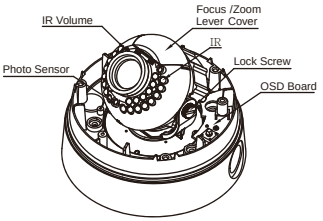
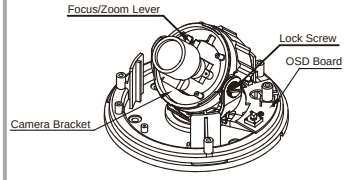
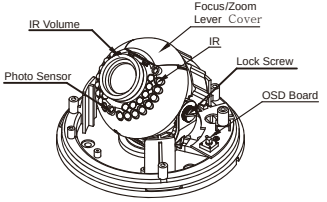


IR TYPE

PLASTIC HOUSING



NORMAL TYPE

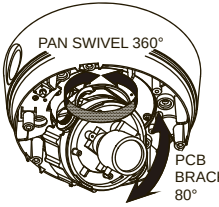


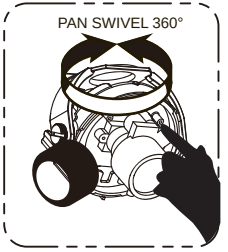
IR TYPE

3-AXIS

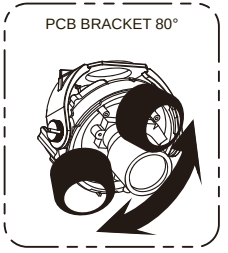
Set Camera DIRECTION (3-axis movement)

Ceiling Type

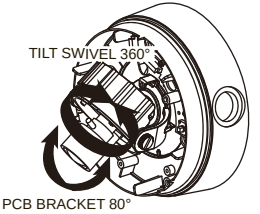


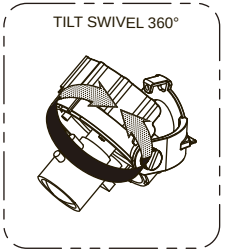


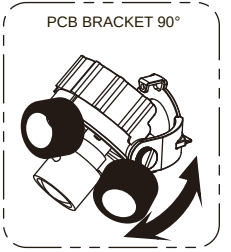
hold the 4 points and swivel it.



Wall Type

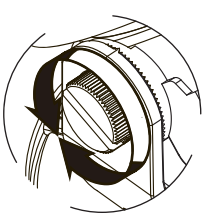




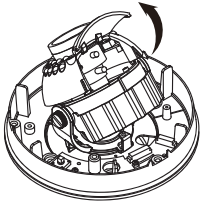


CAMERA SETTING

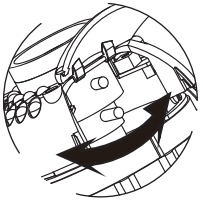
Camera Setting



Lock Screw

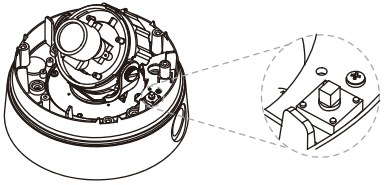


Focus / Zoom
Lever Cover Open



Focus / Zoom Lever

Menu Operation

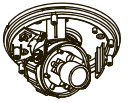


- Up button : Moves the cursor upwards. Use this button to select an item or adjust the parameters.
- Down button : Moves the cursor downwards. Use this button to select an item or adjust the parameters.
- Right button : Moves the cursor to the right. Use this button to select or adjust the parameters of the selected item. The parameter changes each time this button is pressed.
- Left button : Moves the cursor to the left. Use this button to select or adjust the parameters of the selected item. The parameter changes each time this button is pressed.
- Set button : Executes selections and displays a submenu for an item with the ↵ mark.

INSTALLATION

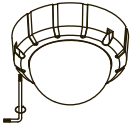
Plastic Dome Camera

3 pcs Vandal Dome Camera



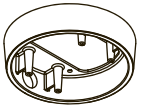
Dome Base

PISE
With Rubber



Decoration Ring
Dome cover

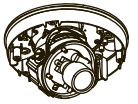
L-Wrench



Surface Mount
bracket

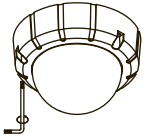
Mount CAP
With Rubber

PISE
With Rubber



Dome Base

Machine Screw
With Rubber



Decoration Ring
Dome cover

L-Wrench

1. Dome Base Mounting
   - Remove the protecting sheet from the rubber bottom and attach it on the base housing.
   - Fix the base housing with the supplied 4pcs of screws(No.8-38 UNC) on the ceiling or wall.
2. Power Supply & Monitor Impedance
   (Power supply)
   - Adaptor: DC12V/1A regulated Power Supply (DC12V Model)
     AC24V/1A or DC12V/1A / (AC24V/DC12V Model)-Option
   - To avoid fire or shock hazard,must use a UL listed power supply. (Monitor Impedance,if available)
   - Set the impedance switch to the 75Ω standard position unless other equipment is looped out of the monitor.
3. Camera Module Adjustment (Pan&Tilt Adjustment)
   - Adjust the camera direction by turning the pan bracket left or right, the tilt bracket up or down, then fix the screws tight. (View Angle Adjustment)
   - For a wider view angle move the zoom lever to wide,for a narrower view angle move it to tele.
   - After accurate adjustment of focal length then adjust the focus lever to near or far for the sharpest focus.
4. Decoration Ring Mounting
   - Firmly fix the decoration ring into place with the screws and by using the supplied L-wrench on the base housing.

ACCESSORIES AND OTHERS

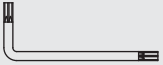
3PCS VANDAL TYPE

Security Tool

Machine Screw

Mount Cap

Mount Screw

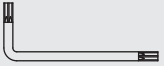


L-wrench

User's Manual

PLASTIC DOME TYPE

Mount Screw

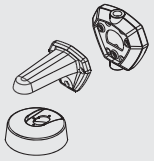


L-wrench

User's Manual

Brackets Optional

Vandal Dome Bracket



DSB Series

CPA Series

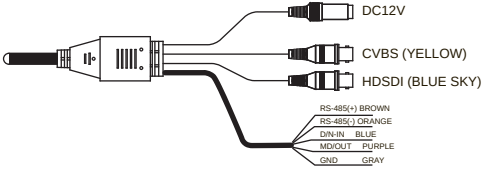
Plastic Dome Bracket

WM-120

CONNECTION

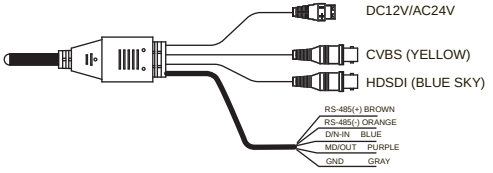
DC 12V power Input Model

- Connect the video out jack to the video in jack monitor
- Connect the adapter to the power input connecter
- Use a DC12V and 1A adapter



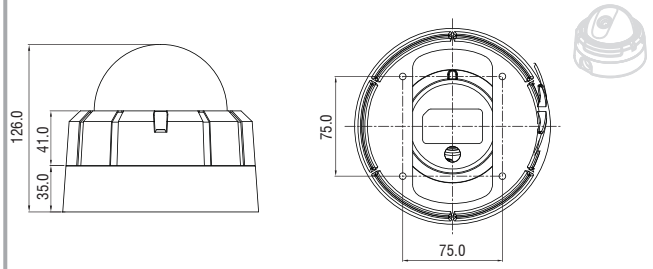
AC 24V / DC 12V Power Input Model

- The wire is non-polarized
- Use AC24V power source or DC 12V power source
- Use AC24V 1A adapter or DC12V 1A adapter

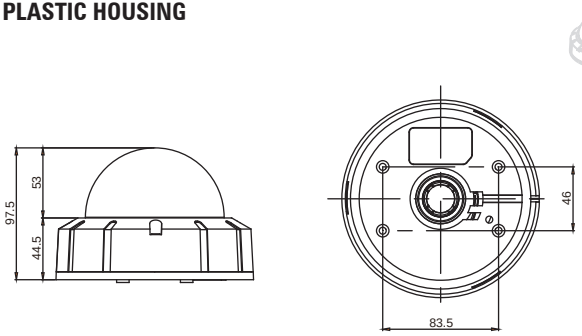


DIMENSIONS (MM)

3PCS VANDAL HOUSINGS

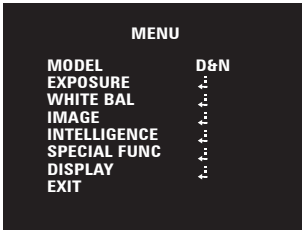


PLASTIC HOUSING



MAIN MENU

MAIN MENU



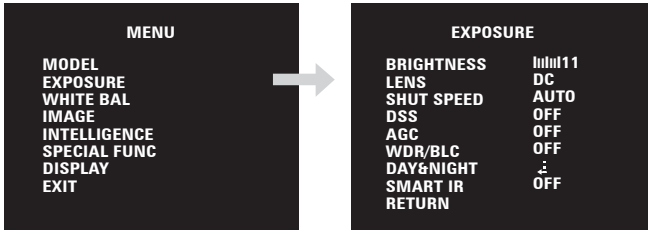
Functions can be set-up using the Menu Key of pelco protocol.
The menu consists of the “Main Menu” and “Sub Menu”.
The main menu is displayed where 6 camera functions can be selected.
The sub-menu is displayed at the push of each main menu selection.

MODEL

Select model

- D&N / COLOR / IR SMART / IR CDS

EXPOSURE



- BRIGHTNESS : Adjust brightness level
  - 0(dark) ~ 20(bright) steps
- LENS - DC / MANUAL
- SHUT SPEED : Can be set in AUTO or MANUAL
  - AUTO / 1/30(25),1/60(50),1/120(100),1/240,1/500,1/1000, 1/2000,1/4000,1/8000,1/16000,1/30000,1/60000 sec
- DSS : Select maximum DSS(Digital Slow Shutter)
  - OFF / x2, x3, x4
- AGC : Select Auto Gain Control
  - OFF / ON
- WDR/BLC : Select WDR(Wide Dynamic Range) or BLC(Back Light Compensation)
  - WDR
    - ▷ WEIGHT : Adjust WDR level - 0 ~ 3
- BLC
  - ▷ AREA : Control BLC area according to light condition.
  - ▷ POS-X : Adjust the window X-Axis position
  - ▷ POS-Y : Adjust the window Y-Axis position
  - ▷ SIZ-X : Adjust the window X-Axis size
  - ▷ SIZ-Y : Adjust the window Y-Axis size

* When WDR is On, ACE and DEFOG function can not turn on.

- DAY&NIGHT : Select Day&Night

1. D&N Model
   - AUTO / DAY / NIGHT / EXT
     - ▷ Delay : 0 ~ 255 second
     - ▷ BURST : OFF / ON
     - ▷ THRS : LOW / MIDDLE / HIGH
       Select Day&Night change level. Higher level make the night mode changed in lower illumination.
     - ▷ GAP : LOW / MIDDLE / HIGH
       Select Day to Night mode change and Night to Day mode change.
2. COLOR Model
   - AUTO / DAY / NIGHT / EXT
     - ▷ Delay : 0 ~ 255 second
     - ▷ BURST : OFF / ON
     - ▷ THRS : LOW / MIDDLE / HIGH
     - ▷ GAP : LOW / MIDDLE / HIGH
3. IR SMART Model
   - AUTO
     - ▷ Delay : ---
     - ▷ BURST : OFF / ON
     - ▷ THRS : ---
     - ▷ GAP : ---
4. IR CDS Model
   - AUTO / DAY / NIGHT
     - ▷ Delay : ---
     - ▷ BURST : OFF / ON
     - ▷ THRS : ---
     - ▷ GAP : ---

EXPOSURE

- SMART IR : OFF / ON
  - ▷ THRS : Set-up Smart IR turns on point. When you level up the value, Smart IR turns on in a low light condition.
  - ▷ AREA : Set up areas to control Smart IR function. When BLC mode is on, Smart IR area is following BLC area.
  - ▷ POS-X : Adjust the window X-Axis position
  - ▷ POS-Y : Adjust the window Y-Axis position
  - ▷ SIZ-X : Adjust the window X-Axis size
  - ▷ SIZ-Y : Adjust the window Y-Axis size
  - ▷ IR COMP : Compensate when IR hunting happens. When you use this function, you should put a test object around 30cm form the camera. If an object is located in nearer than 30cm from the camera and an object what could reflect the light is in front of the camera, the camera cannot compensate a trouble of hunting.

* Smart IR function only works with IR Smart Model.

WHITE BALANCE

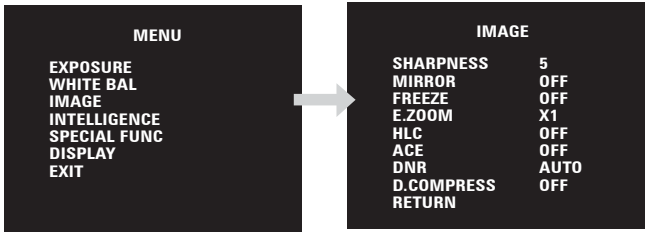
WHITE BALANCE

- AWB : Select WHITE BALANCE mode
  - – AUTO / PRESET / MANUAL / INDOOR / OUTDOOR
  - ▷ AUTO : Automatically adjusts color according to the lighting.
  - ▷ PRESET : It is a fixed white balance mode that may be automatically readjusted only by pressing PRESET
  - ▷ MANUAL : You can change WB as changing "RED GAIN" and "BLUE GAIN" in manual mode.
    - – RED GAIN : Adjust R gain value 0 ~ 20
    - – BLUE GAIN : Adjust B gain value 0 ~ 20
  - ▷ INDOOR : Set color temperature to be Indoor light (3700°K)
  - ▷ OUTDOOR : Set color temperature to be Outdoor light (5100°K)

- CHROMA : Adjust CHROMA gain value
  - – 0 ~ 20 steps

IMAGE

IMAGE

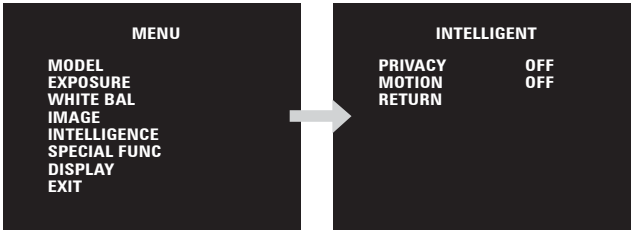


- SHARPNESS : Adjust sharpness level
  - 0 ~ 10 steps
- MIRROR : Select a flip mode
  - OFF / H / V / H&V
    - ▷ H : You can flip the picture horizontally on the screen
    - ▷ V : You can flip the picture vertically on the screen
    - ▷ H&V : You can flip the picture horizontally & vertically on the screen
- Freeze : Select real or still mode
  - OFF / ON
- E.ZOOM : Select maximum digital zoom magnification.
  - x1 ~ x12, x14, x15, x18, x21, x25, x32
- HLC : Select High Light Compensation.
  When extremely bright light is projected to the camera masking is used on the portion to prevent partial saturation on the monitor.
  - OFF / ON
    - ▷ ON LEVEL : 0 ~ 20 steps
      COLOR : Black, White, Yellow, Cyan, Green, Magenta, Red, Blue
- ACE : Select Digital WDR(Wide Dynamic Range)
  - OFF / ON

  * When ACE is On, WDR/BLC and DEFOG function can not turn on.
- DNR : Select Digital Noise Reduction
  - AUTO / OFF / LOW / MIDDLE / HIGH
- D.COMPRESS : Video image data compression function.
  Please use this function only with IP camera.
  - OFF / ON

INTELLIGENT

INTELLIGENT



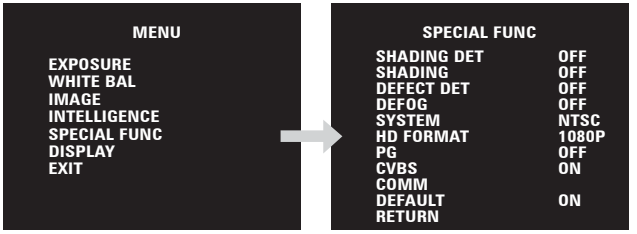
- PRIVACY : Hide an area you want to hide on the screen
  - OFF / ON
    - ▷ MASK# : Select mask area number (0 ~ 31)
    - ▷ MODE : Set-up masking areas. (OFF / ON)
    - ▷ X-POS : Adjust the mask X-Axis position
    - ▷ Y-POS : Adjust the mask Y-Axis position
    - ▷ X-SIZ : Adjust the mask X-Axis size
    - ▷ Y-SIZ : Adjust the mask Y-Axis size
    - ▷ COLOR : Cyan, Green, Magenta, Red, Blue, Black, White, Yellow
    - ▷ TRANS : Select mask transparency level (0 ~ 4)

- MOTION DET : When there is movement of the subject on the screen, there will be motion detection
  - OFF / ON : MD function enable or disable
    - ▷ RESOLUTION : Adjust resolution of MD (0 ~ 4 steps)
      More sensitive to setting lower step with resolution.
      When setting to low step, one object could be detected as several objects. When setting to high step, several objects could be detected as one object
    - ▷ SENSITIVITY : Adjust sensitivity of MD (0 ~ 20 steps)
      More sensitive to setting to lower step with sensitivity
    - ▷ AREA : Designate motion detection area (WHOLE / EACH)
      - ▷ AREA# : Setting 3 areas(0~2) of motion detection
      - ▷ MODE : Limit and define areas of motion detection

▷ X-POS : Adjust the mask X-Axis position
▷ Y-POS : Adjust the mask Y-Axis position
▷ X-SIZ : Adjust the mask X-Axis size
▷ Y-SIZ : Adjust the mask Y-Axis size
▷ TRANS : Adjust color tone of out of selected areas.

▷ SMART ZOOM : Adjust SMART ZOOM of MD (OFF / ON)
  ▷ IN/OUT : Working Zoom in/out following time as setting. (0 ~ 8sec)
  ▷ DWELL : When the camera detects an object has an effective motion, Zoom in the object during a duration time as setting (0 ~ 8sec)
  ▷ WAIT : After zooming in an object is moving during a duration time as setting with Zoom time and do not zoom in the object during a duration time as setting with Normal Time (0 ~ 8sec)
▷ INTERVAL :Select the alarm interval time (0 ~ 255sec)
▷ DWELL : Select the duration time about changing MD mode (0 ~ 255sec)
▷ RETURN

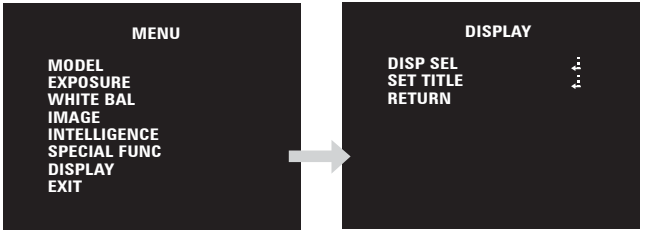
SPECIAL FUNCTION



- SHADING DET : Sets the shading calibration that the lens will perform. Only occurs when the entire screen is viewed in white light.(OFF / ON)
- SHADING : Select Lens shading compensation. (OFF / ON)
- DEFECT DET : Compensates for bad pixels that my occur. Occurs when the whole screen is in full black or if there is bad pixelation and it changes the THRS values until the screen is fixed. (OFF / ON)
- DEFOG : Carry out defog function.
  - OFF / ON
    ▷ LEVEL : abjust amount of fog on display screen.
      0 ~ 10
  * When DEFOG is On, ACE and WDR/BLC function can not turn on.
- SYSTEM : Select NTSC or PAL. (NTSC / PAL)
- HD FORMAT : Select Digital output 1080P or 720P. (1080P / 720P)
- PG : Select Color pattern generator (OFF / ON)
- CVBS : Select Composite signal (OFF / ON)
- COMM : Set up the camera ID, baud rate, protocol
  ▷ ID : Select the camera ID
    - 1 ~ 255
  ▷ BAUD RATE : Select serial communication speed
    - 2400 / 4800 / 9600 / 19200 / 38400 / 57600 / 115200bps
  ▷ PROTOCOL : Select operating protocol
    - PELCO-D / PELCO-P / UPDATE
- DEFAULT : All the settings will be restored to the factory default.

DISPLAY

DISPLAY



- DISP SEL : Select display item.
  - ID : OFF / ON
  - TITLE : OFF / ON
  - EZOOM : OFF / ON

- SET TITLE : Select camera title menu (Text edit)

A B C D E F G H I J K L M N O P Q R S T
U V W X Y Z a b c d e f g h i j k l m n
o p q r s t u v w x y z , . ( ) { } [ ]
0 1 2 3 4 5 6 7 8 9 * + - / = ~ ! ? " '
SP BS CLR POS
RETURN

SPECIFICATIONS

Model	Full HD Mega Pixel Dome Camera
Image Sensor	1/3" Panasonic CMOS
Total Pixels	2010(H) x 1108(V) = 2,227,080 (pixel)
Active pixels	1944(H) x 1092(V) = 2,122,848 (pixel)
Scanning system	Progressive
Resolution	Digital ; 1920x1080p(1080p/30fps) , 1280x720p(720p/60fps)
	Analog : 700TVL
Min. illumination	Color : 1.0 lux , BW : 0.5lux
	Color DSS : 0.002 lux , BW DSS : 0.001 lux
Video Output	HD-SDI
	Analog : NTSC, PAL(without WDR)
S/N Ratio	more than 50dB (AGC off)
Function	
MODEL	D&N / COLOR / IR SMART / IR CDS
EXPOSURE	
BRIGHTNESS	0 ~ 20 steps
LENS	DC / Manual
SHUT SPEED	Auto / Manual (1/30(1/25) ~ 1/60000)
DSS	Off / x2 / x3 / x4
AGC	Off / On
WDR/BLC	Off / WDR / BLC
DAY&NIGHT	Auto / Day / Night / Ext
SMART IR	Off / On
WHITE BAL	Auto / Preset / Manual / Indoor / Outdoor
IMAGE	
SHARPNESS	0 ~ 10 steps
MIRROR	Off / H / V / H&V
FREEZE	Off / On

SPECIFICATIONS

Model	Full HD Mega Pixel Dome Camera
E.ZOOM	x1 ~ x32
HLC	Off / On
ACE	Off / On
DNR	Off / Low / Middle / High / Auto
D.COMPRESS	OFF / ON
INTELLIGENCE	
PRIVACY	Off / On (32 points)
MOTION	Off / On (4 points)
SPECIAL FUNC	
SHADING DET	Off / On
SHADING	Off / On
DEFECT DET	Off / On
DEFOG	Off / On
SYSTEM	NTSC / PAL
HD FORMAT	1080P / 720P
PG	Off / On
CVBS	Off / On
COMM	ID (1 ~ 255)
	BAUDRATE (2400 / 4800 / 9600 / 19200 / 38400 / 57600/115200)
	PROTOCOL (PELCO-P / PELCO-D / UPDATE)
DEFAULT	ON / DONE
Language	English
OSD Text	0 ~ 9 , A ~ Z , a ~ z
Electrical	
Power Source	DC12V TYPE : DC12V±10%
	DUAL TYPE : DC12V±10% , AC24V±10%
Power Consumption	DC12V TYPE : 250mA
	DUAL TYPE : 350mA (DC12V±10%) , 250mA(AC24V±10%)

SPECIFICATIONS

Model	Full HD Mega Pixel Dome Camera
IR	27EA (IR Type)
General	
Power Input	DC JACK
Video Output(HD-SDI)	BNC Connector
Operating Temperature	-10℃ ~ +50℃ (Humidity : 0%RH ~ 80%RH)
Storage Temperature)	-20℃ ~ +60℃ (Humidity : 0%RH ~ 90%RH)

TROUBLESHOOTING

If there are problems in operation, please refer to the solutions below.
If the problem persists, please contact the agent you purchased this product from.

Problems & Sloutions
• Nothing appears on the screen. -Please check the power connection. -Please check the video signal line connection. -Please check and make sure that the lens mode is set to DC (VIDEO) when using a VIDEO (DC) lens.
• The video image is not clear. -Please clean the lens with a clean cloth or brush. -Please adjust so the screen is not exposed directly to a bright light. -Please move the camera if necessary. -Please readjust the back-focus of the camera.
• The screen is dark. -Please adjust the contrast feature of the monitor. -If you have an intermediate device, set the 75 Ω /Hi-Z properly, and check the terminals. -Please check if an auto iris lens is being used and adjust the brightness level.
• The MOTION DETECTION function is not working -Please check if "MOTION DETECTION" mode is turned on. -Please check if the MD Sensitivity is too low. -Please check the setting of the MD AREA.
• The WDR function is not working -Please check if the WDR Level is too low. -Please check if the AE Mode is set to MANUAL. The WDR doesn't work in MANUAL Exposure mode.
• Colors are not quite right. -Please check if the camera is facing directly into sunlight or fluorescent light. -Please check if an auto iris lens is being used. -Please check the connection of the lens connector cable.
• The Day&Night function doesn't work. - Please check if the mode is in a menuset other the Auto mode. - Please check the Day ↔ Night LEVEL.